SAWS OVERSIGHT PROCESSES BINDER
RECORD OF CHANGE LOG – SECTION 2

SECTION NAME: HHSDC SAWS Oversight Plan
RESPONSIBLE PARTY: George Fisher – C-IV Liaison
BRIEF DESCRIPTION OF SECTION: This section contains the current version of HHSDC's State Oversight Activities Plan. The plan outlines HHSDC's collaborative approach to project oversight, and describes specific performance monitoring and risk management activities.

CHANGE LOG

DATE	CHANGE DESCRIPTION/LOCATION	INITIALS

December 2000

HHSDC State Oversight Activities Plan

State Budget Act language for 2000-2001 directs that:

> *The Health and Human Services Agency Data Center (HHSDC) shall, in collaboration with key stakeholders of the Statewide Automated Welfare System (SAWS) including the County Welfare Directors Association, develop a plan for providing additional State oversight of the SAWS consortia system in order to optimize successful project implementation and mitigate project risk. Of the amount appropriated in this item, $1,120,000 for State oversight of the consortia projects shall be available for expenditure 30 days after legislative notification by the Department of Finance of the receipt of an HHSDC State Oversight activities plan that incorporates input from the key State and county stakeholders.*

To ensure satisfaction of this requirement, a portion of the funding appropriated for State oversight of the Statewide Automated Welfare System (SAWS) consortia projects is to be made available for expenditure only after HHSDC submits an "HHSDC State Oversight activities plan" to the Department of Finance (DOF) and the DOF notifies the Legislature of the receipt of the plan.

This document is submitted in satisfaction of the requirement for an "HHSDC State Oversight activities plan" as specified by the Budget Act.

State oversight charter: HHSDC responsibility under the multiple county consortium strategy

The State Budget Act of 1995 established the framework for the multiple county consortium SAWS strategy and specifically assigned certain responsibilities to the HHSDC, then the Health and Welfare Data Center (HWDC). The HWDC was assigned the lead role in a collaborative process to plan for implementation of the strategy. In addition, the Act assigned the following key oversight responsibilities to the HWDC:

- "monitoring all county implementation and on-going operations;" and
- "establish mechanisms for measuring and ensuring cost effectiveness for General Fund Moneys."

The collaborative planning process culminated in the February, 1996 report to the Legislature entitled *"A Plan for Implementing the Multiple County Consortium Strategy"*. This report outlined the

roles and responsibilities of counties, SAWS consortia, the County Automated Welfare System Advisory Committee, and the HWDC.

Summary of Current SAWS Status

As this report is submitted, in December, 2000, the status of the four SAWS consortia is as follows:

- Interim SAWS (ISAWS): Fully operational in 35 counties.
- Los Angeles Eligibility Automated Determination, Evaluation and Reporting (LEADER): Operational for approximately two-thirds of the county's caseload. County wide implementation to be completed April 2001.
- CalWIN: Nine months into a 51-month development and implementation project.
- Consortium IV (C-IV): Awaiting State and federal approval to begin system development and implementation.

Rationale for "Additional" Oversight

The bulk of State oversight resources up to the present time have been dedicated to planning and procurement for CalWIN and C-IV, and monitoring the completion of LEADER development and implementation. When the *Plan for Implementing the Multiple County Consortium Strategy* was published in 1996, Los Angeles County had engaged a system integration contractor and the LEADER application development project had advanced into the design phase. Consequently, it was not feasible to implement an oversight program for LEADER that would have been as comprehensive as a program implemented at the beginning of a new development project. For the last two years, the HHSDC has been developing an approach to oversight that would be applicable to new projects, such as CalWIN and C-IV. Development of this approach has been influenced by the DOIT, the Legislative Analyst's Office, industry best practices, and the lessons learned from LEADER and ISAWS. Key features of the approach have been shared with the consortia managers and other stakeholders as they have been developed. The "additional oversight" referred to in the Budget Act language, then, is actually the initial implementation of a complete oversight program covering primarily the new SAWS development projects: CalWIN and C-IV.

Establishing a Collaborative Approach to Oversight

While the HHSDC is the single point-of-contact between the State and the consortia for implementation of State oversight, the collaborative approach to SAWS oversight involves key stakeholders both in planning and in ongoing implementation of SAWS.

The Budget Act language (FY 2000-2001) referenced above requires that key SAWS stakeholders collaborate in the development of the plan for additional oversight activities. The key stakeholders listed below have had the opportunity to provide input to the plan now being presented:

- California Department of Social Services;
- California Department of Health Services;
- California Health and Human Services Agency;
- Department of Finance;
- Department of Information Technology; and
- County Welfare Directors Association/County Consortia Project Managers.

In addition to the development of this plan, these key stakeholders will participate in a committee that has been established to work collaboratively on SAWS oversight issues. Local level oversight is provided by the QA/IV&V vendors acquired by each consortium project.

The committee will be comprised of staff appointed by the program departments, the DOIT, the DOF, the HHSDC, the appropriate consortium manager(s) as determined by the agenda items, and the CWDA Information Technology representative. This group will meet at least monthly and have ad hoc meetings as needed. This committee will receive project status reports, discuss project issues, review results of oversight activities, and assess risks and changes. The committee will also consider the need to modify the oversight approach based upon lessons learned, best practices, consultant recommendations, or other material input. The HHSDC will provide the committee chair, track and record committee actions, and provide other necessary administrative support. Escalation of issues within the organization of each committee member will be the responsibility of the member. HHSDC will coordinate the resolution of escalated issues.

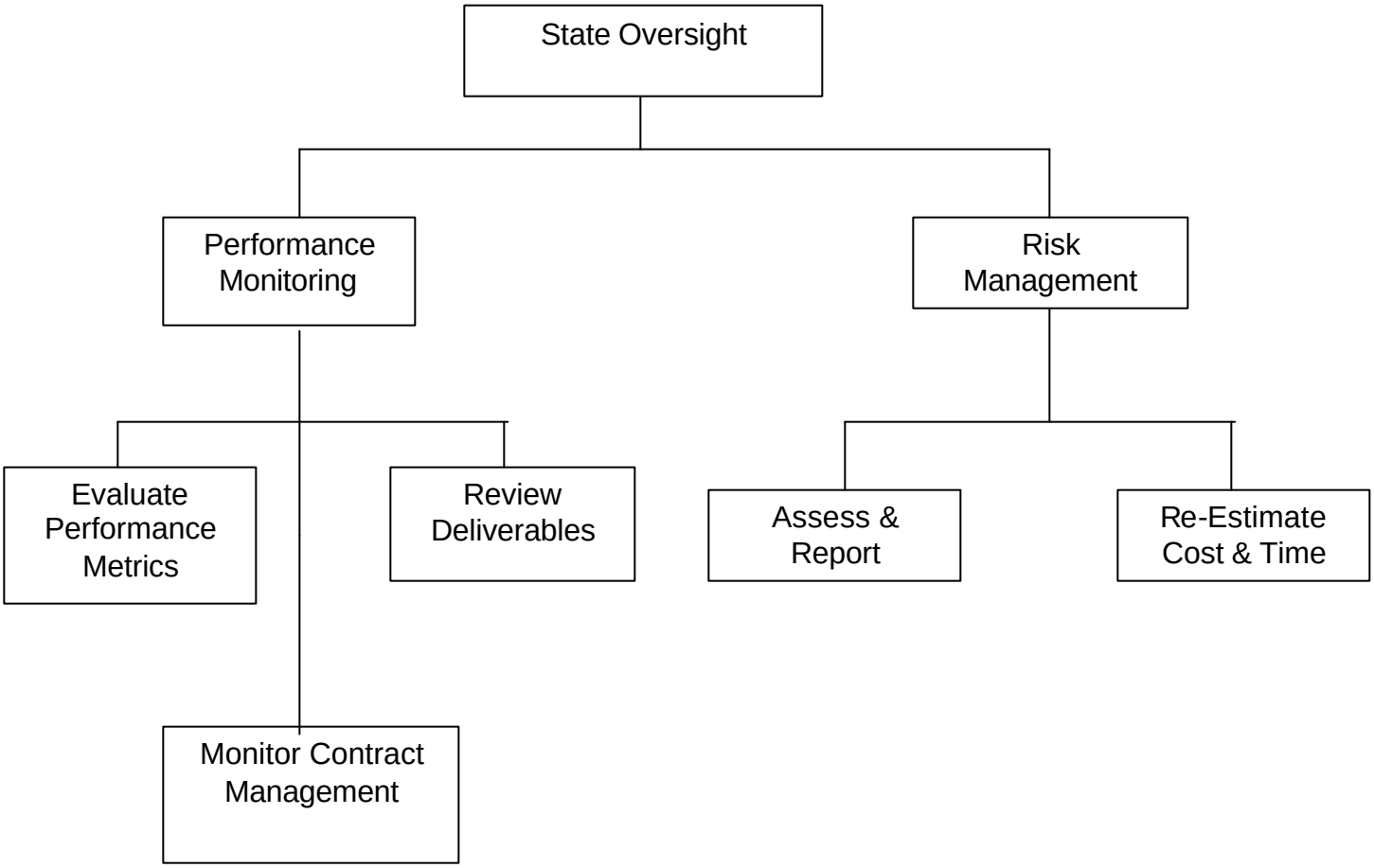
The names of the individuals initially assigned to the oversight committee are listed in Attachment 1.

Oversight Activities

The following organizational schema divides State oversight activity into two major areas:

- Performance monitoring, and
- Risk management.

Within each major area, a variety of activities will be performed by State staff and outside consultants. The diagram below illustrates the major activities to be performed. Each function is described in more detail on the following page.



The HHSDC has developed a tailored approach to oversight based upon a small set of broad objectives. These broad objectives represent key outcomes or capabilities desired by the State. They are:

- Early warning of deviations from plan (in terms of both resources and schedule), consortium plans for remediation, and the capability to make credible independent estimates of time and cost to completion when deviations occur;
- A better quality product (i.e., fewer defects; higher rate of defect discovery in early stages; high user satisfaction);
- Increased control of software change order impact and cost; and
- More effective mitigation of technical architecture risk.

For each objective, a set of practical issues or questions about the project have been identified for monitoring. The oversight program consists of identifying, collecting, and evaluating the information required to answer these questions (performance monitoring), and using the results to identify and help mitigate project risks (risk management).

PERFORMANCE MONITORING

Performance monitoring encompasses those activities that are directly related to tracking project progress against the approved plan, reviewing interim products, and monitoring adherence to contract terms and conditions by all parties.

To translate State oversight objectives into a practical performance monitoring program, the HHSDC has developed a set of key questions, based upon "lessons learned," industry best practices, and input from key stakeholders, that will drive performance monitoring activities. These questions cover the critical areas of:

- Schedule and progress (e.g., "Are milestone/deliverable dates being met?")
- Resources and cost (e.g., "How do resource expenditures (hours used), compare to plan?")
- Requirements growth and stability (e.g., "Are new requirements/change orders causing the overall size of the system to grow?")
- Product quality (e.g., "Are deliverables at an adequate level of detail; complete; accurate; and traceable to system requirements?") and
- Technical adequacy (e.g. "Will the proposed hardware and software configuration provide adequate capacity to meet operational performance requirements at full-load?")

Attached is a complete list of the specific questions driving performance monitoring activities in each of the five categories, the data required to adequately monitor performance, and the expected sources of the data (Attachment 2).

Evaluate Performance Metrics*

The HHSDC will track, evaluate and report project performance in part based upon specific input, including but not necessarily limited to:

***The ISAWS and Los Angeles LEADER project contracts were executed prior to this requirement, which is contained in CalWIN and will be in C-IV.**

- Actual effort expended (person-hours (days)) compared to planned effort;
- Actual delivery dates (for each planned deliverable) compared to planned delivery dates;
- Actual acceptance/approval dates (for each planned deliverable) compared to planned delivery dates;
- Deliverable review times and deliverable review results;
- Actual revenue received (by the contractor) compared to planned revenue to identify potential schedule or quality problems.
- Key staff experience compared to proposed experience; and
- Key staff turnover compared to industry standards/averages.

In addition, the HHSDC and the stakeholder oversight committee will review all aspects of project progress and may initiate tracking of other metrics (e.g. software defect identification and resolution) as appropriate to the stage of the project.

Review Deliverables

Deliverable review will help the State develop an independent perspective on project progress, requirements growth and stability, product quality, and technical adequacy. Since the purpose for the deliverable review process is to support State oversight objectives, incorporation of HHSDC input, if any, will *not* be a prerequisite for consortium approval of contractor provided deliverables. State oversight review is, however, expected to take place concurrently with the consortium review, to the degree feasible. The HHSDC will work with each consortium to develop a mutually agreeable process for transmitting and responding to any important issues that arise out of the oversight process.

In addition, each consortium will work with the HHSDC to develop a mutually agreeable approach for notifying the HHSDC and accommodating HHSDC attendance at selected presentations, Joint Requirements Planning (JRP), or equivalent, sessions, walk-throughs, demonstrations, and similar activities, to the extent that these are not covered by deliverable review, as described above.

As coordinated by the HHSDC, deliverable review will be performed by:

- HHSDC staff;
- Independent consultants hired by the HHSDC; and
- The CDSS, the CDHS and the DOIT.

HHSDC staff will review:

- All planning deliverables, e.g. Project Control Documents (PCDs), PCD updates, MSProject files, Deliverable Expectations Documents, etc.;
- Written project status reports from the implementation prime contractor, and from quality assurance (QA) and/or independent verification and validation (IV&V) contractors;
- Selected components of major deliverables generated by the system design and development process; and
- Project deliverable review results, as prepared by the consortia and their consultants.

Independent consultants retained by the HHSDC will review

- Technical architecture deliverables, performance modeling and benchmark results, and any other contractor work products bearing upon issues of technical adequacy;
- Functional specifications and test plans; and
- Source code.

The HHSDC will work with the DOIT, the DOF, the CDSS, the CDHS and each consortium to develop a list of specific deliverables to be reviewed by the State departments. The list that has been developed for CalWIN is provided in Attachment 3 to this report. The HHSDC will be responsible for assisting these departments in the deliverable review process, for consolidating their comments, and providing the results to the consortia as appropriate.

Monitor Contract Management

State oversight will monitor the adherence to contract provisions by all parties. This includes especially:

- Contractor and consortium compliance with applicable performance requirements;
- Contractor and consortium adherence to project scope definition;
- Consortium response to contractor performance problems (if any); and
- Change order processing.

As described above, one of the State's fundamental oversight objectives, which is shared by the consortia, is to achieve increased control of software change order impact and cost. Experience has shown that change orders that impact application software have proven to be a significant source of cost increases in similar projects. Experience indicates that despite project management's best judgment, to effectively challenge change orders, better information is necessary. To address this issue, the HHSDC plans to retain specialized consulting assistance to develop methodologies that will permit independent confirmation of contractor cost and time estimates for change orders with significant application software impact. The approach developed should be useable during both system development and ongoing maintenance. The State will continue to review only those change orders which result in an amendment to the contract, a significant change in the strategy, or a significant technical issue. The State will be responsive to the consortiums projects request to become involved early in the change order request.

Consortium Impact

In order to implement the oversight program described above, substantial participation will be required from the SAWS consortia. Each consortium will be expected to:

- Provide State oversight staff with timely access to information. The following must be supplied or made available by the consortium:
  - ✓ System development contractor work products, including draft and final versions of contractual deliverables;
  - ✓ Results of reviews by the consortium, and its consultants, of contractor work products; and
  - ✓ System development contractor hours expended in performance of the contract.
- Cooperate with State reviewers, including outside consultants, in their performance of the various oversight tasks described in this plan.
- Retain its own outside QA/IV&V consultants.
- Conduct a meeting, at least monthly, between State oversight staff and the consortium project manager to review project status and discuss issues.
- Collaborate with the HHSDC on the use of their QA/IV&V budget to ensure areas of interest are appropriately addressed.

The State recognizes that any funding needs for the SAWS Projects will be addressed through the normal State budget process. The initiation and

continuation of these projects remain subject to the availability of funding and legislative concurrence for funding and expenditure authority.

RISK MANAGEMENT

Risk management encompasses those activities that involve identifying, evaluating, tracking, and mitigating project risks. It includes reporting and "escalation" of significant risks within the stakeholders' organizations. While the bulk of the day-to-day work of risk management must be done at the consortium level, a project such as this presents a unique risk profile to other funding/oversight entities, such as the State. Consequently, risk management is a critical component of the State's oversight role.

Assess and Report

The output and findings from the performance monitoring component of State oversight become input into the risk management process. In addition, the HHSDC will review and evaluate the consortium project management team's risk management activities and will, periodically, use specialized consultants to conduct "point-in-time" project assessments to provide an independent perspective. This input will permit the stakeholder committee described above to identify, assess, and develop mitigation strategies for project risks. Risk identification, assessment, and mitigation activities will be tracked in a database maintained by the HHSDC and specifically designed to support software project risk management. This risk data base will be periodically made available to the consortia.

Re-estimate Resource Requirements

Since experience shows cost and time overruns are among the most common and most significant risks encountered in large software development projects, State oversight includes a specific program of analysis and monitoring in this area that goes beyond what has been the norm in similar projects.

The HHSDC has developed preliminary estimates of the size of the CalWIN and C-IV applications and related these metrics to estimates of person-hours of effort and time to complete using independently developed estimation models. The approach is to use specialized consultants to re-estimate the size of CalWIN and C-IV at discrete points when more information about the product is available. Such milestones would include completion of the requirements specification/validation, completion of general design, and completion of detailed design. The HHSDC expects that function points, or a similar measure, will be used as a measure of size. The CWDA, consortia managers, and the State will jointly evaluate the results of the function point analysis. If it is applicable it will be used in State decision making. If applicable, these size estimates could be used to revise and refine our estimates of level of effort and time to completion. Significant deviations from the plan will be further analyzed as potential project risks. In addition, as a separate and independent effort, the HHSDC plans to

retain a specialist to make an assessment of the actual size of the LEADER and ISAWS finished products. The results of this effort will not only provide information about those systems, but are expected to serve as a point of reference for the CalWIN and C-IV re-estimation tasks.

Use of Specialized Consultants: Summary

The foregoing outline of State oversight activities makes several references to the use of specialized consultants to support IV&V. To recap, specialized consulting resources will be used in the following areas:

- Obtain Baseline Data: LEADER and ISAWS. The consultant will determine the values of certain variables and characteristics of LEADER and ISAWS, such as size in function points and lines of code. The results of this effort are expected to serve as a point of reference for the CalWIN and C-IV re-estimation tasks.

- Periodic application size re-estimation. This task requires re-estimation of the size of CalWIN (and later, C-IV) at project milestones, when more information about the product is available. The HHSDC anticipates that such milestones would include completion of the requirements specification/validation, completion of general design, completion of detailed design, and completion of coding. The HHSDC expects that function points, or a similar measure, will be used. As noted above, the CWDA, consortia managers, and the State will jointly evaluate the results of the function point analysis. If it is applicable it will be used in State decision making.

- Periodic technical architecture review and assessment. This task requires a periodic assessment of the planned technical architecture of CalWIN (and C-IV) in terms of feasibility, capacity/performance, scalability, and risk. The HHSDC plans reassessment at project milestones when more information about the product is available. The HHSDC anticipates that such points would include completion of the requirements specification/validation, completion of general design, completion of detailed design, and during user acceptance testing.

- Periodic review of functional specifications. This task requires an IV&V assessment of the functional components of the requirements specifications, general system design, and detailed system design from a software engineering point of view. At a minimum, completeness, consistency, feasibility, and testability will be assessed.

- Review of source code deliverable(s). This task will consist of an IV&V assessment of the unit-tested code delivered as part of CalWIN and C-IV. At a minimum, completeness and consistency of the delivered code will be reviewed and assessed.

- Independent point-in-time project assessment. To ensure an adequate level of independence and to add a fresh perspective to the oversight and risk identification process, independent consultants will be retained to periodically perform brief (approximately 30 days each) reviews of the project and provide the HHSDC with findings and recommendations.

- Change order sizing. Specialized consulting assistance will be used to assist in developing methodologies that will permit independent confirmation of contractor cost and time estimates for change orders with significant application software impact. As noted above, the State will continue to review only those change orders which result in an amendment to the contract, a significant change in the strategy, or a significant technical issue.

The timing of the use of specialized consulting services will be largely determined by the performance of each consortium's development and implementation contractor. For illustrative purposes, a tentative timeline for the use of specialized consulting services during the CalWIN development process is shown in Attachment 4.

HHSDC State Oversight Activities Plan – Attachment 1
Stakeholder Oversight Committee Membership
June 2001

Calvin Rogers, California Department of Social Services

Mike Babcoke, California Department of Social Services

Bob Birdseye, California Department of Health Services

Sandy Kazer, Department of Finance

Lisa Mangat, Department of Finance

Debbie McFadden, California Department of Social Services

Richard Keene, Department of Information Technology

Bob Ferguson, Department of Information Technology

Meg Sheldon, County Welfare Directors Association

Barbara Kelsey, ISAWS Consortium Manager

Rene Camou, LEADER Project Director

Sandra Erbs, CalWIN Project Director

Van Vanderzyde, C-IV Project Director

Steve Howe, Health and Human Services Data Center

George Christie, Health and Human Services Data Center

Gino Maiolini, Health and Human Services Data Center

Ben Selvidge, Health and Human Services Data Center

HHSDC State Oversight Activities Plan – Attachment 2

Summary of HHSDC Performance Monitoring Activity – table showing criteria, required data (input), source of input, and what HHSDC does with the input

P 2

p 3

P 4

HHSDC State Oversight Activities Plan – Attachment 3

CalWIN Deliverables To Be Reviewed

Shown below is the preliminary list of the CalWIN deliverables DOIT and/or DHS will review.

DOIT	DHS	Deliverable
	X	Validation of Functional and Technical Requirements
X		• Data Usage Analysis Report
		• Technology and Environmental Requirements Report
		General System Design
X		• Data Storage and Access Requirements
X		• Hardware and Software Requirements
X	X	• Proof of Concept Demonstration
X		• Application Registration Prototype
		Detailed System Design
X	X	• Telecommunications Design Document
		Infrastructure Development
X	X	• Change Management Procedures
X		• Software Distribution Procedures & Requirements
		Conduct System Test
X	X	• System Test Cases, Situations, Data, & Acceptance Criteria
X		• Certification of Readiness for Acceptance Test
X		Transition Plan
X		Back-Up, Recovery, and Hot Site Plan
	X	User Acceptance Test
X		• Test Condition List
X		• Final User Acceptance Test Report
		• Pilot County Readiness Report
		Pilot Test
X	X	• Pilot Test Plan
X	X	• Pilot County Conversion Report
X	X	• Pilot Test Evaluation Report
		Training
	X	• Training Plan
	X	• User Manual and Support Training Aids
		Conversion
X	X	• Specification Document
X		• Conversion Plans
		Implementation/FM&O Planning
X	X	• Facilities Management & Operations Plan
	X	• Network Management & Central Help Desk Procedures
X		• Back-Up & Recovery Plan
X		• Disaster Recovery Plan
X	X	• Issue Resolution Procedures

HHSDC State Oversight Activities Plan – Attachment 4

Tentative CalWIN timeline